IN THE CLAIMS:

Claims 1 - 10 (cancelled)

11. (New) In a system for controlling braking of an aircraft during landing, said system including wheel velocity signal generating means for producing a wheel velocity signal that is a function of the rotational speed of a wheel and an associated tire of the aircraft, and means for generating a command brake pressure signal for controlling a command brake pressure to a wheel brake of the aircraft, means for generating a reference velocity signal indicating a desired reference velocity, means for comparing said wheel velocity signal with said reference velocity signal for generating a velocity error signal indicative of the difference between said aircraft wheel velocity signal and said reference velocity signal, a brake controller for generating a brake pressure control signal for the wheel of the aircraft to cause the aircraft wheel velocity to converge to said reference velocity, based upon an estimated command brake pressure and an estimated value of a coefficient of friction between the tire and runway surface, and means for providing an antiskid control signal, the improvement comprising:

means for summing said brake pressure control signal and said antiskid control signal to produce said command brake pressure signal.

12. (New) The system of Claim 11, wherein said brake controller comprises a discrete Kalman regulator for determining the estimated command brake pressure and the estimated value of the coefficient of friction between the tire and runway surface.

13. (New) The system of Claim 12, wherein said discrete Kalman regulator comprises a control feedback gain matrix and a Kalman filter, said Kalman filter receiving said velocity error signal and a brake torque feedback signal, and said Kalman filter generating an estimated velocity error signal and an estimated brake pressure, and said control feedback gain matrix receives said estimated velocity error signal and said estimated brake pressure to generate said estimated command brake pressure and the estimated value of the coefficient of friction between the tire and runway surface.

14. (New) In a method controlling braking of an aircraft during landing, the method including the steps of generating a wheel velocity signal that is a function of the rotational speed of a wheel and an associate tire of the aircraft, and applying a command brake torque signal based upon a command brake pressure to the wheel brake of the aircraft, generating a reference velocity signal indicating a desired reference velocity, comparing said wheel velocity signal with said reference velocity signal for generating a velocity error signal indicative of the difference between said aircraft wheel velocity signal and said reference velocity signal, generating a brake pressure control signal for the wheel of the aircraft to cause the aircraft wheel velocity to converge to said reference velocity, based upon an estimated command brake pressure and an estimated value of a coefficient of friction between the tire and runway surface, and providing an antiskid control signal, the improvement in the method comprising the step of:

summing said brake pressure control signal and said antiskid control signal to produce a command brake pressure signal.

15. (New) The method of Claim 14, wherein said step of generating a brake pressure control signal comprises determining the estimated command brake pressure and the estimated value of the coefficient of friction with a discrete Kalman regulator.

16. (New) The method of Claim 15, wherein said discrete Kalman regulator comprises a control feedback gain matrix and a Kalman filter, said Kalman filter receiving said velocity error signal and a brake torque feedback signal, said Kalman filter generates an estimated velocity error signal and an estimated brake pressure, and said control feedback gain matrix receives said estimated velocity error signal and said estimated brake pressure to generate said estimated command brake pressure and the estimated value of the coefficient of friction between the tire and runway surface.